

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-36 (Canceled)

Claim 37 (Previously Presented): An imaging apparatus comprising:

an image sensing unit adapted for sensing an electromagnetic wave image of a subject; and

a controller adapted for generating a first signal for permitting an irradiating unit to irradiate an electromagnetic wave and a second signal for initializing said image sensing unit, so as to overlap a first period and a second period,

wherein the first period is an interval between a timing when the first signal is outputted from said controller and a timing when the electromagnetic wave is outputted from said irradiating unit, and

wherein the second period is an interval between a timing when the second signal is outputted from said controller and a timing when the initialization of said image sensing unit has been completed.

Claim 38 (Previously Presented): An apparatus according to claim 37, wherein said controller controls so that one of the first signal and the second signal starts after the other has started and before it has stopped.

Claim 39 (Previously Presented): An apparatus according to claim 37, wherein said image sensing unit has a photo-electric conversion device which outputs a signal in accordance with an electromagnetic wave and the second period is an interval between a timing when the second signal, for initializing said photo-electric conversion device, is outputted from said controller and a timing when the initialization of said photo-electric conversion device has been completed.

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Claim 40 (Previously Presented): An apparatus according to claim 39, wherein the second period is an interval for a pre-discharge of said photo-electric conversion device.

Claim 41 (Previously Presented): An apparatus according to claim 37, wherein said image sensing unit has a grid which absorbs scattered rays from the subject, and said controller generates a third signal for driving said grid so as to overlap the first, the second and a third period, wherein the third period is an interval between a timing when the third signal is outputted from said controller and a timing when the initialization of said grid has been completed.

Claim 42 (Previously Presented): An apparatus according to claim 41, wherein the initialization of said grid is that a position and a moving speed of said grid should reach a target.

Claim 43 (Previously Presented): An apparatus according to claim 37, wherein said image sensing unit has a photo-electric conversion device which outputs a signal in

accordance with an electromagnetic wave and a grid which absorbs scattered rays from the subject, and said controller generates a third signal for driving said grid so as to overlap the first, the second and a third period, wherein the third period is an interval between a timing when the third signal is outputted from said controller and a timing when the initialization of said grid has been completed.

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Claim 44 (Previously Presented): An apparatus according to claim 37, wherein said controller generates the first signal so that an irradiation of the electromagnetic wave starts at a timing when a fourth period is elapsed after said controller has received a fourth signal which instructs a start of imaging, the fourth period being the longer one of the first and second period.

Claim 45 (Previously Presented): An apparatus according to claim 41, wherein said controller generates the first signal so that an irradiation of the electromagnetic wave starts at timing when a fourth period is elapsed after said controller has received a fourth signal which instructs a start of imaging, the fourth period being the longest one of the first, second and third period.

Claim 46 (Previously Presented): An imaging system comprising:
an irradiating unit adapted for irradiating an electromagnetic wave;
an image sensing unit adapted for sensing an electromagnetic wave image of a subject using the electromagnetic wave; and

a controller adapted for generating a first signal for permitting said irradiating unit to irradiate the electromagnetic wave and a second signal for initializing said image sensing unit, so as to overlap a first period and a second period,

wherein the first period is an interval between a timing when the first signal is outputted from said controller and a timing when the electromagnetic wave is outputted from said irradiating unit, and

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cont. wherein the second period is an interval between a timing when the second signal is outputted from said controller and a timing when the initialization of said image sensing unit has been completed.

Claim 47 (Previously Presented): A method adapted to an imaging apparatus including an image sensing unit adapted for sensing an electromagnetic wave image of a subject, comprising a step of:

controlling a controller to generate a first signal for permitting an irradiating unit to irradiate an electromagnetic wave and a second signal for initializing the image sensing unit, so as to overlap a first period and a second period,

wherein the first period is an interval between a timing when the first signal is outputted from the controller and a timing when the electromagnetic wave is outputted from the irradiating unit, and

wherein the second period is an interval between a timing when the second signal is outputted from the controller and a timing when the initialization of the image sensing unit has been completed.

Claim 48 (Previously Presented): A method according to claim 47, wherein in said controlling step, one of the first signal and the second signal is started after the other has started and before it has stopped.

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Claim 49 (Previously Presented): A method according to claim 47, wherein the image sensing unit has a photo-electric conversion device which outputs a signal in accordance with an electromagnetic wave and the second period is an interval between a timing when the second signal, for initializing the photo-electric conversion device, is outputted from the controller and a timing when the initialization of the photo-electric conversion device has been completed.

Claim 50 (Previously Presented): A method according to claim 49, wherein the second period is an interval for a pre-discharge of the photo-electric conversion device.

Claim 51 (Previously Presented): A method according to claim 47, wherein the image sensing unit has a grid which absorbs scattered rays from the subject, and said controlling step includes controlling the controller to generate a third signal for driving the grid so as to overlap the first, the second and a third period, wherein the third period is an interval between a timing when the third signal is outputted from the controller and a timing when an initialization of the grid has been completed.

Claim 52 (Previously Presented): A method according to claim 51, wherein the initialization of the grid is that a position and a moving speed of the grid should reach a target.

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Claim 53 (Previously Presented): A method according to claim 47, wherein the image sensing unit has a photo-electric conversion device which outputs a signal in accordance with an electromagnetic wave and a grid which absorbs scattered rays from the subject, and said controlling step includes controlling the controller to generate a third signal for driving the grid so as to overlap the first, the second and a third period, wherein the third period is an interval between a timing when the third signal is outputted from the controller and a timing when an initialization of said grid has been completed.

Claim 54 (Previously Presented): A method according to claim 47, wherein in said controlling step, the first signal is generated so that an irradiation of the electromagnetic wave starts at a timing when a fourth period is elapsed after the controller has received a fourth signal which instructs a start of imaging, the fourth period being the longer one of the first and second period.

Claim 55 (Previously Presented): A method according to claim 51, wherein in said controlling step, the first signal is generated so that an irradiation of the electromagnetic wave starts at a timing when a fourth period is elapsed after the controller has received a fourth signal which instructs a start of imaging, the fourth period being the longest one of the first, second and third period.

Claim 56 (Previously Presented): A computer-readable storage medium which stores a program for executing a method adapted to an imaging apparatus including an image

sensing unit adapted for sensing an electromagnetic wave image of a subject, the method comprising a step of:

controlling a controller to generate a first signal for permitting an irradiating unit to irradiate an electromagnetic wave and a second signal for initializing the image sensing unit, so as to overlap a first period and a second period,

wherein the first period is an interval between a timing when the first signal is outputted from the controller and a timing when the electromagnetic wave is outputted from the irradiating unit, and

wherein the second period is an interval between a timing when the second signal is outputted from the controller and a timing when the initialization of the image sensing unit has been completed.

Claims 57-60 (Canceled)

Claim 61 (New): An imaging apparatus comprising:

an image sensing unit adapted to sense an electromagnetic wave image of a subject;

a storage device adapted to store a state holding time of said image sensing unit with every image sensing conditions, the state holding time including at least one of an initialization time, signal accumulation time and read out time of the signal of said image sensing unit;

an image sensing condition instructing device adapted to input an information relating to the image sensing condition; and

a controller adapted to read out the state holding time of said image sensing unit stored in said storage device on the basis of the information relating to the image sensing condition inputted by said image sensing condition instructing device, and control a state of said image sensing unit based on the state holding time of said image sensing unit.

Claim 62 (New): An image system comprising:

an irradiating unit adapted to irradiate an electromagnetic wave;

an image sensing unit adapted to sense an electromagnetic wave image of a subject using the electromagnetic wave;

a storage device adapted to store a state holding time of said image sensing unit with every image sensing conditions, the state holding time including at least one of an initialization time, signal accumulation time and read out time of the signal of said image sensing unit;

an image sensing condition instructing device adapted to input an information relating to the image sensing condition; and

a controller adapted to control said image sensing unit and said irradiating unit,

wherein said controller reads out the state holding time of said image sensing unit stored in said storage device on the basis of the information relating to the image sensing condition inputted by said image sensing condition instructing device, and controls a state of said image sensing unit and a state of said irradiating unit with a predetermined relationship based on the state holding time of said image sensing unit.

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Claim 63 (New): The imaging apparatus according to claim 62, wherein said storage device further stores irradiation delay time of said irradiating unit, and said controller determines a timing for generating a start signal of the initialization for said image sensing unit on the basis of the irradiation delay time, and a timing for generating a irradiation permitting signal for said irradiating unit.

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Claim 64 (New): The image apparatus according to claim 62, wherein said controller determines the initialization time, a timing for generating a start signal of the initialization for said image sensing unit on the basis of the irradiation delay time, and a timing for generating a irradiation permitting signal for said irradiating unit so that a start timing of the signal accumulation of said image sensing unit coincides with a start timing of the irradiation of said irradiating unit.

Claim 65 (New): The imaging apparatus according to claim 62, wherein said controller controls so that the signal accumulation of said image sensing unit starts after the irradiation of said irradiating unit started.

Claim 66 (New): The imaging apparatus according to claim 62, wherein said controller controls so that the irradiation time of said irradiating unit finishes on the basis of an information relating the start timing of the accumulation of said image sensing unit.

Claim 67 (New): An imaging system comprising:
an irradiating unit adapted to irradiate an electromagnetic wave;

an image sensing unit adapted to sense an electromagnetic wave image of a subject using the electromagnetic wave;

a grid driving unit adapted to drive a grid which is arranged in a path of the electromagnetic wave irradiated by said irradiating unit;

a storage device adapted to store a state holding time of said image sensing unit with every image sensing conditions, the state holding time including at least one of an initialization time, signal accumulation time and read out time of the signal of said image sensing unit;

an image sensing condition instructing device adapted to input an information relating to the image sensing condition; and

a controller adapted to control said image sensing unit and said grid driving unit, wherein said controller reads out the state holding time of said image sensing unit stored in said storage device on the basis of the information relating to the image sensing condition inputted by said image sensing condition instructing device, and controls a state of said image sensing unit and a state of said grid driving unit with a predetermined relationship based on the state holding time of said image sensing unit.

Claim 68 (New): An imaging system comprising:

an irradiating unit adapted to irradiate an electromagnetic wave;

an image sensing unit adapted to sense an electromagnetic wave image of a subject using the electromagnetic wave;

a grid driving unit adapted to drive a grid which is arranged in a path of the electromagnetic wave irradiated by said irradiating unit;

a storage device adapted to store a state holding time of said image sensing unit with every image sensing conditions, the state holding time including at least one of an initialization time, signal accumulation time and read out time of the signal of said image sensing unit;

an image sensing condition instructing device adapted to input an information relating to the image sensing condition; and

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concl. a controller adapted to control said image sensing unit, said irradiating unit and said grid driving unit,

wherein said controller reads out the state holding time of said image sensing unit stored in said storage device on the basis of the information relating to the image sensing condition inputted by said image sensing condition instructing device, and controls a state of said image sensing unit, a state of said irradiating unit, and a state of said grid driving unit with a predetermined relationship based on the state holding time of said image sensing unit.

Claim 69 (New): The imaging apparatus according to claim 68, wherein said storage device further stores irradiation delay time of said irradiating unit, an initialization time of said grid driving unit, and said controller determines a timing for generating a start signal of the initialization for said image sensing unit, a timing for generating a irradiation permitting signal for said irradiating unit, and a start timing of grid driving of said grid driving unit on the basis of the initialization time of said image sensing unit, the irradiation delay time, and the initialization time of said grid driving unit.
